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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/862,983	05/22/2001	Jonathan Abela	00-GR2-032	7519

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EXAMINER

DAVIS, ROBERT B

ART UNIT	PAPER NUMBER
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1722

DATE MAILED: 06/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/862,983

Applicant(s)

ABELA ET AL.

Examiner

Robert B. Davis

Art Unit

1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7 and 8 is/are allowed.
- 6) ☒ Claim(s) 1-6 and 9-15 is/are rejected.
- 7) ☒ Claim(s) 16-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

**DETAILED ACTION**

***Response to Arguments***

1. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6, 14 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese reference (3-250635: figures 1-9 and English abstract).

The Japanese reference teaches a mold (10) having two mold sections (figure 5), wherein the mold (10) has a plurality of molding cavities (4) for housing a semiconductor device, a plurality of transfer chambers (2) and a plurality of injection channels (3) extending between the transfer chambers and the molding cavities, the injection channels are formed in the parting line of the mold (figure 5), and at least one blind channel (12) that connects the injection channels a distance from the molding cavities and the transfer chambers. The reference teaches forming a blind appendage, which is connected to the runner formed in the injection passage. The language about the flash is intended use and the reference will also act to form the flash around the blind appendage. Please note that the blind channels (12) at the side edges of the mold are in fact blind as these do not connect to an adjacent injection channel.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese reference (3-250635) taken together with Obara (5,071,612: figure 3).

The Japanese reference discloses a method of encapsulating semiconductor elements in molding cavities (4) comprising: placing the elements in the molding cavity (inherent step for forming a package as described in the abstract), the mold including a plurality of transfer chambers (2) and a plurality of injection channels (3) and a blind channel (12) which connects the injection channels, injecting material into the injection channels, blind channels and molding cavities by using a ram (figure 5), and hardening the resin in the mold and channels. The if flash occurs statement is not a required

element as the claim does not require the formation of flash. The blind channel (12) of the reference will be attached to the flash if formed. The reference does not disclose a lead frame placement step.

Obara discloses a process of encapsulating semiconductor elements comprising placing a leadframe (2) into the mold (as shown in figure 3) before molding.

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify the process of the Japanese reference by placing a leadframe in a mold before packaging or encapsulating as disclosed by Obara as such was a well known manner of locating a plurality of chips in a mold such that a number of chips are accurately placed in a number of adjacent molding cavities simultaneously.

***Allowable Subject Matter***

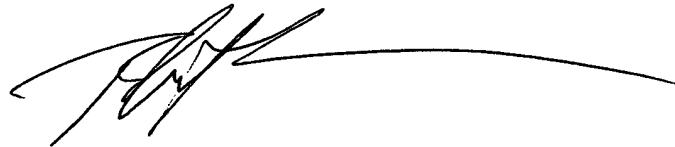
7. Claims 7 and 8 are allowed over the prior art of record.
8. Claims 16-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: None of the prior art teach or suggest an insert having one face that partly constitutes the wall of the injection cavity and wherein the complementary channel extends around the insert so as to form an annular space communicating with the injection cavity. The Japanese reference teaches a blind channel but fails to disclose or suggest the structure above of claim 7. In regards to claim 16, the Japanese reference fails to disclose or suggest that the complementary channel is not directly connected to

any injection cavity of the injection circuit so as to not directly communicate with any injection cavity of the injection circuit. In regards to claim 19, the Japanese reference fails to disclose or suggest three blind channels wherein the first and second blind channels are connected by a third blind channel. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert B. Davis whose telephone number is 703-308-2625. The examiner can normally be reached on Monday-Friday 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on 703-308-0457. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Robert B. Davis  
Primary Examiner  
Art Unit 1722

6/2/03

June 2, 2003